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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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DETAILED ACTION

Response to Arguments

Applicant's arguments with respect to claims **14-36** have been considered but are moot in view of the new ground(s) of rejection.

Applicant has amended the claims to be of a scope not previously considered. Consistent with applicant's argument that the prior art relied on in the previous office action fail to show, disclose and/or teach certain aspects of applicant's invention now recited in the claims filed on **06/18/2010**, applicant has amended the claims to include at least the following:

14. (Currently Amended)

A mixing device for mixing gas **provided by a gas regulating device with** combustion air for a gas burner, comprising:

a monolithic housing defining:

air inlet;

an outlet,

a first fluid path extending between the air inlet and the outlet;

a venturi nozzle situated in the fluid path between the air inlet and the outlet;

a gas inlet;

a second fluid path extending from the gas inlet to the venture nozzle of the housing;

wherein the gas inlet is configured **as a female receptacle for receiving a protruding outlet stub of the** gas regulating device;

a first releasable fastener that releasably fastens the gas regulating device relative to the monolithic housing, with the protruding outlet stub of the gas regulating device in a sealing relationship with the gas inlet of the housing, the first releasable fastener being hand releasable by a user such that the gas regulating device can be quickly, removed and separated from the housing; and

a second releasable fastener that releasably fastens the monolithic housing to a support, plate of a blower with the outlet of the monolithic housing in fluid communication with an aperture in the support plate of the blower, the second releasable fastener being

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hand releasable by a user such that the monolithic housing can be quickly removed and separated from the blower.

26. (Currently Amended)

A gas burner, comprising:

a combustion chamber;

a mixing device configured to mix gas and combustion air, the mixing device including a **monolithic** housing **defining** a venturi nozzle, wherein the venturi nozzle is integrated in the housing in such a way that the housing and the venturi nozzle are formed as a **single piece**;

a blower having a **supporting** plate;

wherein the **monolithic** housing **of the mixing device further** includes **one or more integral fastener features** configured **to releasably interlock with corresponding features** of the support plate of the blower; and

the blower, when activated, acts on the mixing device to suck in a mixture of gas and combustion air provided by the mixing device and **feed** the mixture to the combustion chamber of the gas burner.

34. (Currently Amended)

A mixing device for mixing gas and combustion air for a gas burner, said mixing device comprising:

a **monolithic** housing;

side walls that define a venturi nozzle that forms a flow duct, the flow duct having an inlet for accepting combustion air and an outlet for providing a mixture of gas and combustion air;

a gas inlet opening extending through a side wall of the housing **and into the flow duct intermediate the inlet and the outlet of the monolithic housing**, the gas inlet **configured to interface** a gas outlet **port** of a gas regulating device **situated in a gas regulating device housing**; and

wherein **the gas inlet of the monolithic housing is configured to interface with** the gas outlet **port** of the gas regulating device; and

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a releasable fastener for releasably fastening the monolithic housing to the gas regulating device such that a gas tight seal is formed between the gas inlet of the monolithic housing and the gas outlet port of the gas regulating device, the releasable fastener being hand releasable by a user such that the gas regulating device can be quickly removed and separated from the monolithic housing.

In response to the prior art of record cited in the previous examiner's action and in support of the scope of the invention now presented in the amended claims, applicant argues the following:

“None of DE 197 33 768, Phillips, or GB 1397536, taken alone or in combination, appear to teach many of the elements of claim 14 including, for example, a **monolithic** housing that defines: (1) an air inlet; (2) an outlet; (3) a first fluid path extending between the air inlet and the outlet; (4) a venturi nozzle situated in the fluid path between the air inlet and the outlet; (5) a gas inlet; (6) a second fluid path extending from the gas inlet to the venturi nozzle of the housing; (6) wherein **the gas inlet** is configured as **a female receptacle** for receiving a protruding outlet stub of the gas regulating device. Nor do DE 197 33 768, Phillips, or GB 1397536, taken alone or in combination, appear to teach **a first releasable fastener** that releasably fastens the gas regulating device relative to the monolithic housing, with **the protruding outlet stub of the gas regulating device in a sealing relationship with the gas inlet of the housing**, the first releasable fastener **being hand releasable by a user such that the gas regulating device can be quickly removed and separated from the housing**, and **a second releasable fastener** that releasably fastens the monolithic housing to a support plate of a blower with the outlet of the monolithic housing in fluid communication with an aperture in the support plate of the blower, **the second releasable fastener being hand releasable by a user such that the monolithic housing can be quickly removed and separated from the blower**, particularly in combination with the other elements of the claim. Notably, the so-called gas outlet stub (cited as 64 in Phillips, see Figure 5) of a gas regulating device of Phillips appears to be part of the overall carburettor assembly, and would not appear to be part of a gas regulating device that is easily or quickly removed and separated from a mixing device. For these and other reasons, claim 14 is believed to be clearly patentable over DE 197 33 768, Phillips, and GB 1397536. For similar and other reasons, claims 15-25, which depend from claim 14 and include significant additional distinguishing features, are also believed to be clearly patentable over DE 197 33 768, Phillips, and GB 1397536.”

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In response to applicant's argument(s) directed to the prior art previously relied on, and in response to the scope of the invention now set forth in the presently amended claims, the following examiner's action now relies on the prior art reference(s) of **** in view of **** .

**** shows and discloses **** .

**** shows and discloses **** .

Accordingly, while applicant's arguments have been carefully considered, applicant's claims do not patentably distinguish applicant's invention over the prior art of record.

See the examiner's action herein below.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 14 and 34 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "quickly removed" in claims 14 and 34 is a relative term which renders the claim indefinite. The term "quickly removed" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention quickly.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims Rejected under - 35 USC § 103

Claims 14, 26, 34-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over **DE 197 33 768** in view of **NL 1000129 C6 (Luttikholt)** or **WO 02/077526 (Veronese et al)** and **JP 61106957** and Official Notice.

DE 197 33 768 shows and discloses shows a mixing device for mixing gas (12) and combustion air (6) for a gas burner (1), it being possible for a mixture of gas and combustion air that is provided by the mixing device to be fed to the gas burner by means of a blower (2), said mixing device comprising:

- a **monolithic** or single piece housing (15);
- side walls that define a venturi nozzle that forms a flow duct (at 16), the flow duct having an inlet (12) for accepting combustion air (6) and an outlet (at 4) for providing a mixture of gas and combustion air;
- a gas inlet (5) opening extending through a side wall of the housing **and into the flow duct intermediate the inlet and the outlet of the monolithic housing,** the gas inlet **configured to interface** a gas outlet **port** (not shown; necessarily present) of a gas regulating device (7) **situated in a gas regulating device housing;** and
- wherein **the gas inlet of the monolithic housing is configured to interface with** the gas outlet **port** of the gas regulating device.

DE 197 33 768 shows:

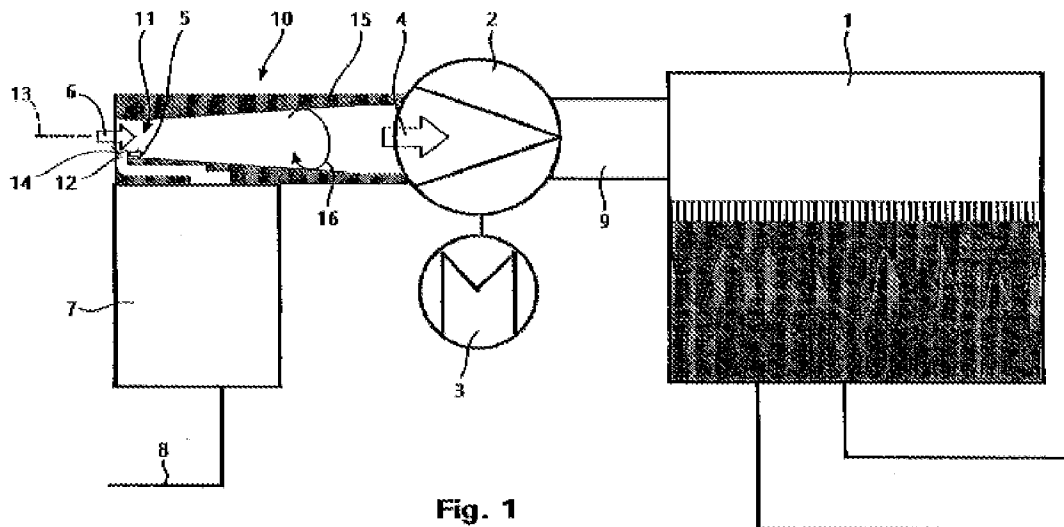


Fig. 1

DE 197 33 768 A1

Number:
Int. Cl. A:
Classification:
11. Februar 1998

The English language Abstract of **DE 197 33 768** indicates the following:

At least one inflow aperture (12) for combustion gas (5) leads into the venturi tube (11) **in the area of its narrowest cross-section**. Each inflow aperture is arranged eccentrically to the tube axis (13) and the combustion gas flowing out of the inflow aperture is directed parallel to the tube axis. The inflow aperture is formed by an inflow tube extending into the venturi tube. The venturi tube upstream of the at least one inflow aperture is divided into at least two separated cross-section halves, one for the air (6) and at least one for the combustion gas (5).

DE 197 33 768 shows and discloses the invention substantially as set forth in the claims with possible exception to:

- a **monolithic** or single piece housing; and
- a releasable fastener for releasably fastening the monolithic housing to the gas regulating device such that a gas tight seal is formed between the gas inlet of the monolithic housing and the gas outlet port of the gas regulating device, the releasable fastener being hand releasable by a user such that the gas regulating device can be quickly removed and separated from the monolithic housing.

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NL 1000129 C6 (Luttikholt) teaches, from applicant same gas burner mixer field of endeavor, forming the air-gas mixing device of a gas fired appliance as a monolithic or single piece venture housing (27), wherein the outlet is intended to be directly attached to a fan inlet opening (3).

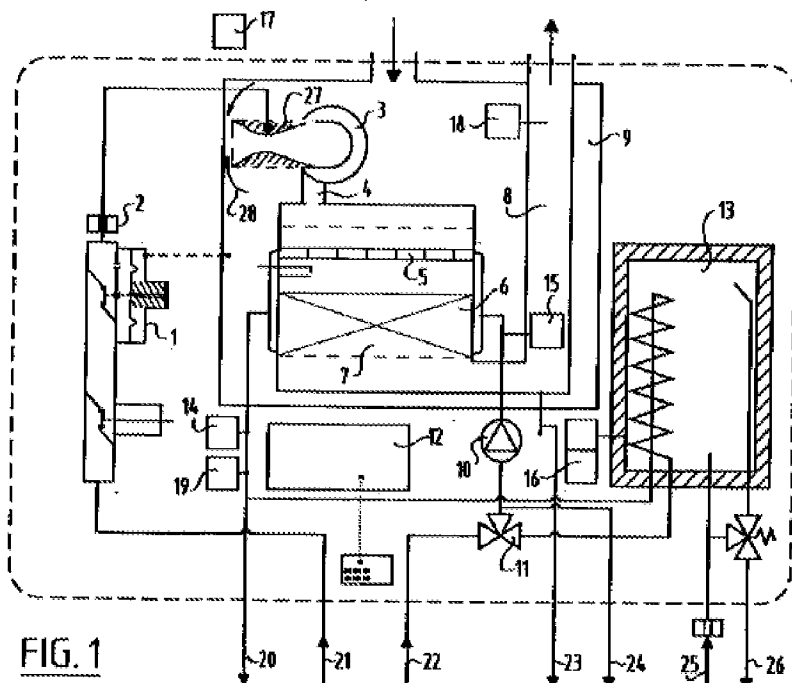
The English language Abstract of NL 1000129 C6 (Luttikholt) indicates the following:

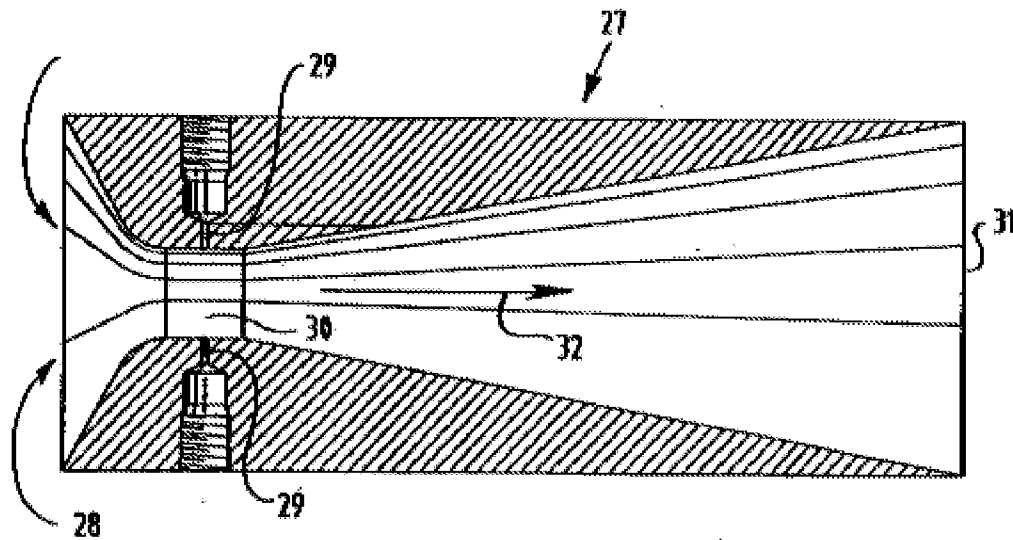
“The gas is fed, via a cut-off valve **and a pneumatic regulator valve**, to four radial jets (29). The jets are positioned equispaced around the narrowed throat of the venturi tube (27).

The **air (28) is drawn through** the tube and into the burner manifold by a fan. The air flow over the jet outlets and the shape of the venturi tube ensure a uniform distribution of gas in the gas and air mixture (31).”

(Bolding and Highlighting added)

NL 1000129 C6 (Luttikholt) shows:



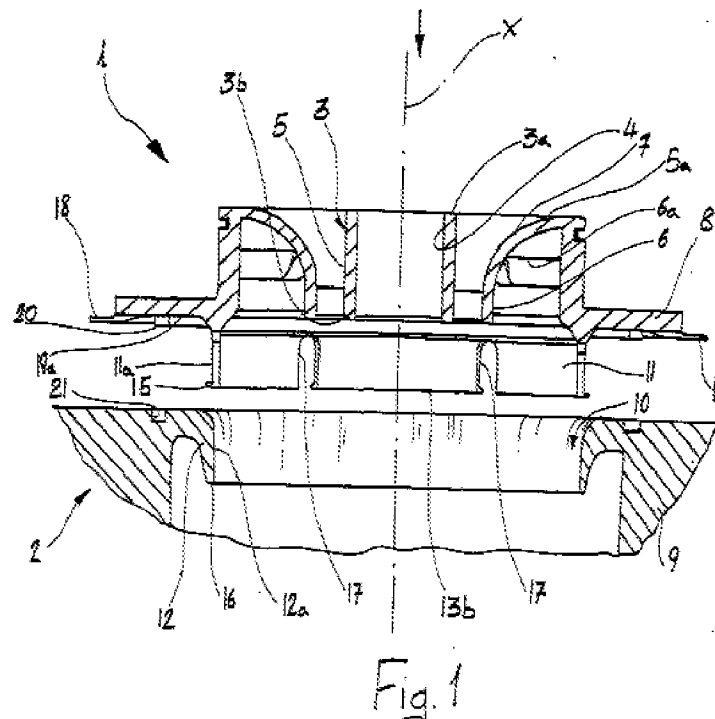
**FIG. 2**

WO 02/077526 (Veronese et al) teaches, from applicant same gas burner mixer field of endeavor, forming the air-gas mixing device of a gas fired appliance as a monolithic or single piece **thermoplastic** venture housing (1), wherein the outlet is intended to be directly attached to a fan inlet opening (3) plate with a quick connect (see page 1, line 22-24; page 3, lines 11-12; page 5, lines 6-14) without the aide of tools.

The English language Abstract of **WO 02/077526 (Veronese et al)** indicates the following:

“A system for connecting an air-gas mixing device (1) to a fan (2), in which an output section (3b) of the mixer (1) is connected, in flow communication, to an intake opening (10) of the fan (2) is described and comprises a first plug/socket coupling element and a second plug/socket coupling element (11, 12) which are provided on the mixer (1) and on the fan (2) respectively, and can be engaged in one another coaxially, and axial restraining means (15, 16) between the elements (11, 12), for the axial restraint of the mixer (1) relative to the fan (2).”

WO 02/077526 (Veronese et al) shows:



JP 61106957 teaches, from applicant same gas burner mixer field of endeavor, a releasable fastener for releasably fastening a gas-air mixer housing (1) to a gas regulating device (9, 11) such that a gas tight seal (14, 20) is formed between the gas inlet of the housing and the gas outlet port (11d) of the gas regulating device, the releasable fastener (bolts; shown figure 2) being hand releasable by a user such that the gas regulating device can be quickly removed and separated from the monolithic housing.

The English language Abstract of **JP 61106957** indicates the following:

ABSTRACT:

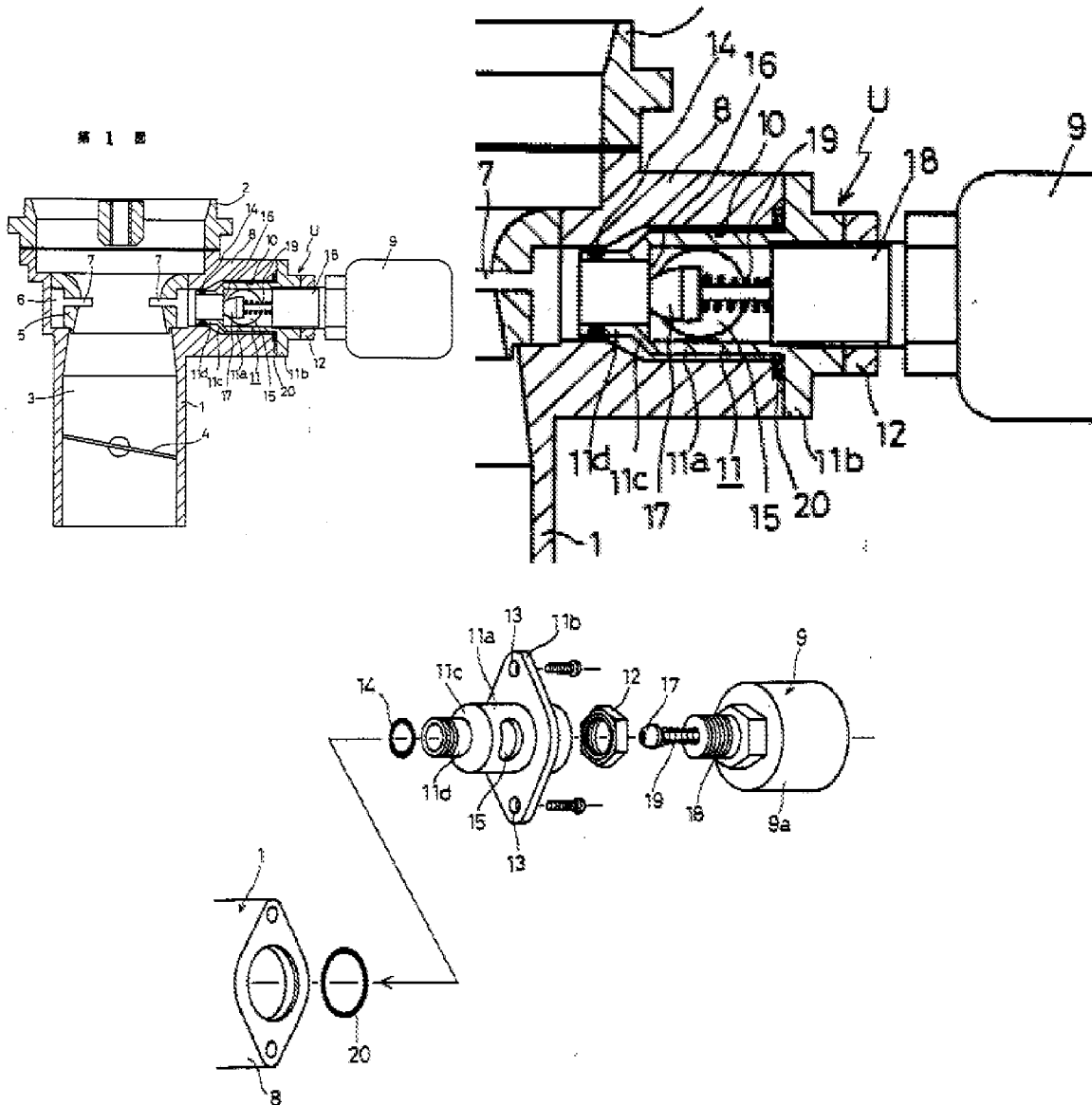
PURPOSE: To surely perform initialization of a unit and simplify its replacement when the unit causes a trouble or the like, by removably mounting the unit of a valve seat and a needle control valve unit initially set to a carburetor body.

CONSTITUTION: A control unit U, adjusting fuel supplied to a nozzle 7 in a Venturi 5 of a carburetor body 1, is fitted into a mounting hole 10 in a side surface of the body 1 and fixed by a screw or the like. When the control unit U is assembled, first the unit, screwing a threaded part 18 of a step motor 9 to a valve seat member 11 and adjusting by the thread 18 a diameter in an orifice 16, formed as a clearance between a valve seat part

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11C and a needle **valve** 17, as the initialization, is fixed by a lock nut 12. This unit U, being fitted into the mounting hole 10, is assembled by fixing a flange part 11b and a mounting part 8 of the body 1 through a screw.

JP 61106957 shows:



In regard to **claims 14-36**, for the purpose of providing a suitable mixing device, it would have been obvious to a person having ordinary skill in the art at the time of the invention to form for the single piece venturi unit shown in **DE 197 33 768** to be in the form of a monolithic, or one piece, wherein the fuel passage is radially extending, in view of the teaching(s) of **NL**

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1000129 C6 (Luttikholt) or **WO 02/077526 (Veronese et al)**. Also, in regard to **claims 14**, and **34**, in particular, For the purpose of providing a space saving compact venture and valve adaptation and arrangement for connecting and securing the fuel regulating valve to the radially extending fuel passage, it would have been obvious to a person having ordinary skill in the art at the time of the invention to modify the gas inlet of **DE 197 33 768** to include a female receptacle or cavity receiving a protruding stub and necessary associated sealing means of a gas regulating valve, in view of the teaching of **JP 61106957**. In regard to **claims 14, 15** and **17-30**, in particular, for the purpose of providing a suitable means for releasably fastening the mixing device with the fan inlet, it would have been obvious to a person having ordinary skill in the art at the time of the invention to form the single piece venturi shown in **DE 197 33 768** as a plastic (i. e. – “thermoplastic”) monolithic material having projections formed to engage a mounting plate of on the fan so as to for a hand operated (i. e. – without tools) along with sealing means (see **WO 02/077526 (Veronese et al)**, 20, 21) operated fastening device, in view of the teaching(s) of **WO 02/077526 (Veronese et al)**. In regard to **claim 17** and **20**, Official Notice is taken that it is well known to use metal as a suitable material for fan plate mountings. As such, in view of that which is well know it would have been obvious to a person having ordinary skill in the art at the time of the invention to form a mounting plate in **DE 197 33 768** from metal.

In addition, with regard to **claims 14-36**, the recitation “quickly removed” is merely a relative term not otherwise defined which relates merely to the functional operation of the claimed invention and the recitation. Also, with regard to **claims 14, 21-24** and **36**, the recitation(s) “quickly removed” and “hand releasable by a user” are deemed to be merely statement(s) of intended use which fails to further define the claimed invention over the releasable flange and bolt fastening device taught by **JP 61106957**. That is, the releasable flange and bolt fastening device is capable of being “hand releasable by a user”, in that locating the flange and inserting and tightening the bolts in **JP 61106957** may take place by manual manipulation, by a user’s hand, and at various relative speed of installation, wherein at least one of the relative speeds would be thought of as occurring more “quickly” than another. At least in the same manner only broadly recited in applicant's claim. Notwithstanding the capabilities of **JP 61106957**, with regard to **claims 14, 21-24** and **36** with regard to the valve fastening device, Official Notice is taken that it is well known in the art of fluid flow conduit connectors or

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fastening devices to employ relatively “quick” operating or “quick-acting” means, known to include snap or spring clip features, in place of more conventional flange and bolt type fasteners in order to eliminate more time consuming steps requiring the use of tools during installation (see for example: US 4128391, US 2021241, US 3574359, US 5370527, US 4458719, US 5150880). Therefore, in regard to **claims 14, 21-24 and 36**, in view of that which is well known and for the known purpose, it would have been obvious to a person having ordinary skill in the art at the time of the invention to employ a quick acting (i.e. - tool free) fastening device, such as from the notorious well known snap and clip type, as the valve assembly fastening means in **DE 197 33 768** as modified by **JP 61106957**, as a suitable alternative means for securing the valve assembly to the venture housing. Similarly, in regard to **claims 14-19, 26 and 31**, Official Notice is taken that it is well known in the art of fluid flow conduit connectors or fastening devices to employ relatively “quick” operating or “quick-acting” means, known to include selectively engaging projection and recesses (e.g. – bayonet type), as a suitable quickly operable fastener in order to eliminate more time consuming steps requiring the use of tools during installation (see for example: US 4797072, US 5021048, US 5404614, US 6276908, US 6474959, US 5901695, GB 2036295). Therefore, in regard to **claims 14-19, 26 and 31**, in view of that which is well known and for the known purpose, it would have been obvious to a person having ordinary skill in the art at the time of the invention to employ a quick acting (i.e. - tool free) fastening device, such as from the notorious well known to include selectively engaging projection and recesses (e.g. – bayonet type), as the venturing and fan assembly fastening or coupling means in **DE 197 33 768** as modified by **WO 02/077526 (Veronese et al)**, as a suitable alternative means for securing the valve assembly to the venture housing.

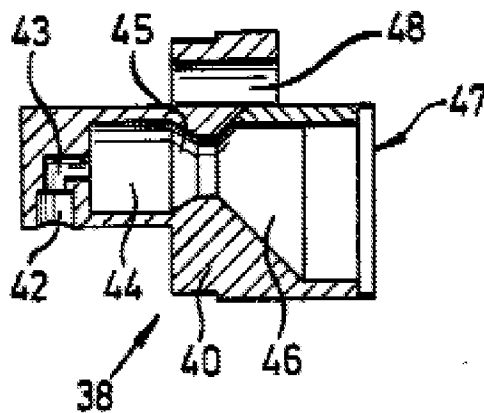
Conclusion

See the attached USPTO 892, as well as previously presented USPTO 892, forms for prior art made of record and not relied upon which is considered pertinent to applicant's disclosure.

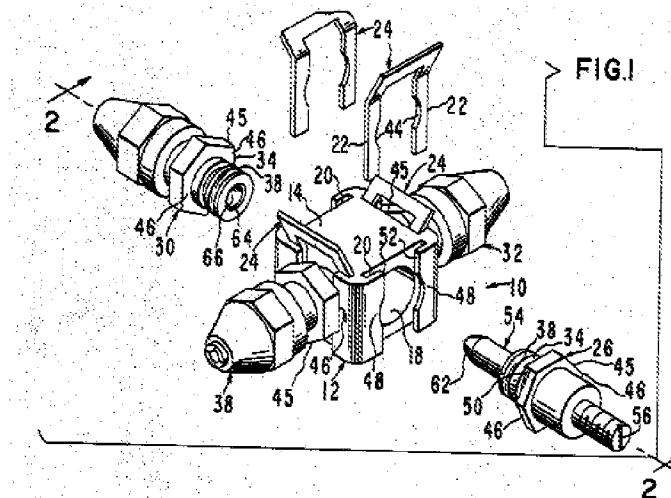
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DE 36 04 314 (Gruber) shows (Figure 5) and discloses a monolithic material body or housing (40, 48) having a Venturi shaped nozzle (44, 46) or passage formed therein.

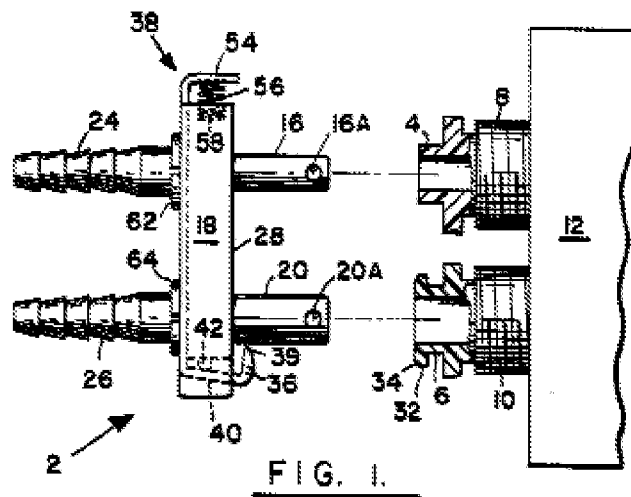
FIG. 5



US 3538940 shows:



US 4116476 shows:



US 6332773 Kuhn shows:

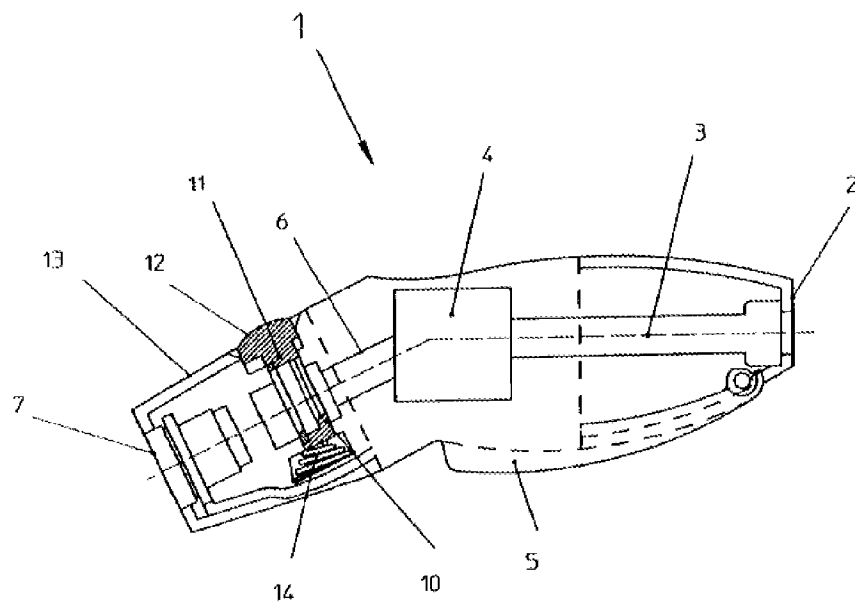
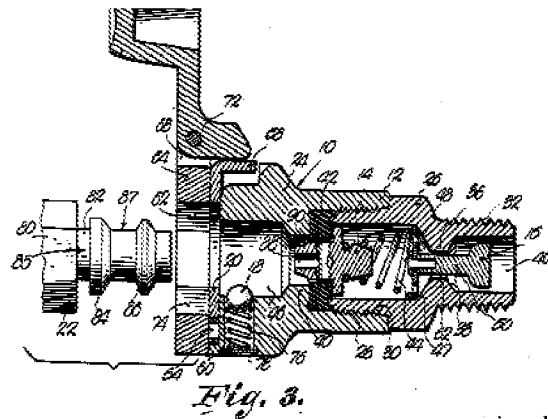


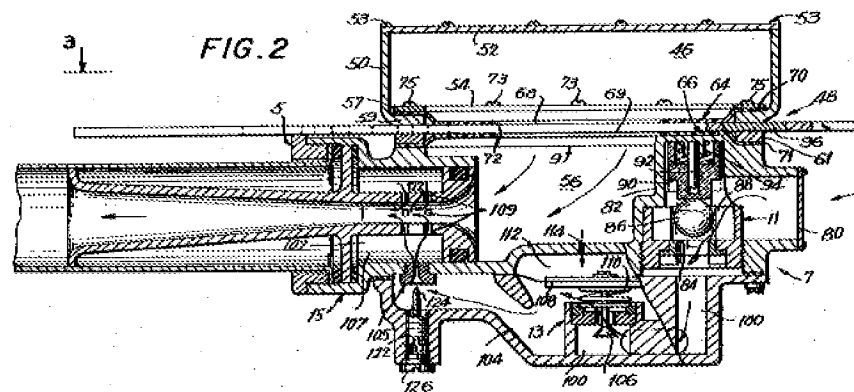
Fig. 1

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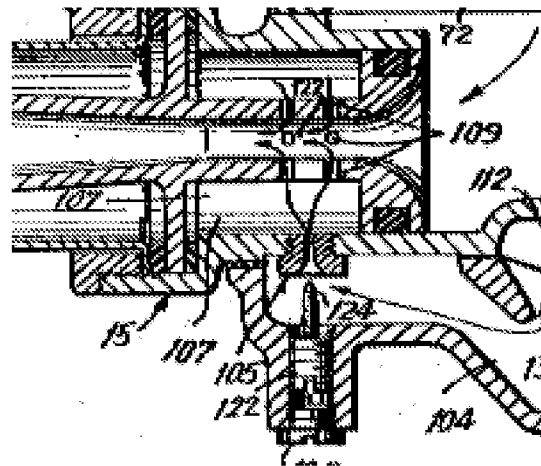
US 2771308 shows:



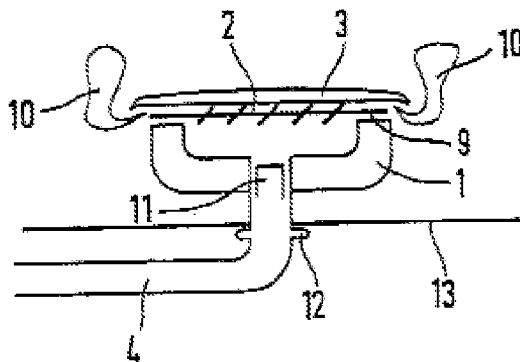
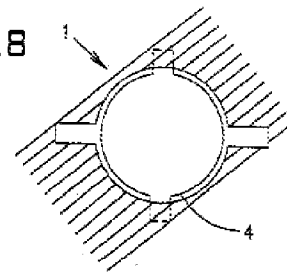
US 3468298 (Teague, Jr. et al) teaches, from applicant's same air and fuel gas mixer field of endeavor, a gas regulating device (5) fastened relative to a mixer unit (107, 109), the gas regulating device including a gas outlet stub (105) that is insertable into a corresponding recess in the monolithic unit. US 3468298 (Teague, Jr. et al) shows the fastening of the gas regulating device relative to the monolithic unit includes a sealing element (gaskets and ring seals are shown in figure 2; not referenced). US 3468298 (Teague, Jr. et al) further teaches a gas-routing duct (109) is configured to introduce fuel gas through an opening that opens out radially into the venturi flow duct.



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US 5901695 (Deptolla) teaches, from applicant's same gas mixer burner field of endeavor, that it is known to use bayonet type flow joint fasteners as quick connect joint means (figure 8) in gas mixer burners for securing a venturi mixer housing to further burner inlet components (1). In another embodiment (FIG. 8), the burner head 1 can also be fixed by means of an easily detachable connection, e.g. a bayonette closure, on the mixing pipe.

FIG. 1**FIG. 8**

GB 2036295 shows:

A gas burner comprises a body 1 formed by two sheet metal shells 2, 3, joined together by flanges along their margins and shaped to constitute a body of Venturi tube form with an expansion chamber 5 and a chimney tube 6. A bracket 8 is secured to the base 10 of a cooking apparatus and is provided with a flange 9 to locate the burner body. A burner head 7 extends through a central aperture 12 of the bracket 8, the latter being provided with resilient tongues to engage in oblique slots 18 of the head 7 so that the latter is releasably fastened by means of the **bayonet joint type**. Screws 15 engage in nuts 14 secured to the bracket 8 in order to hold a

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dished ring 16 which engages the upper wall 11 of the cooking apparatus housing. An igniter 13 is secured in a hole in the bracket 8.

3/3

8036295

Fig. 5

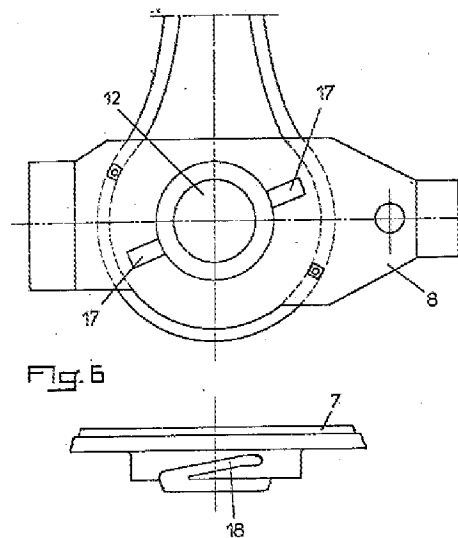
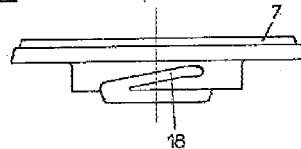
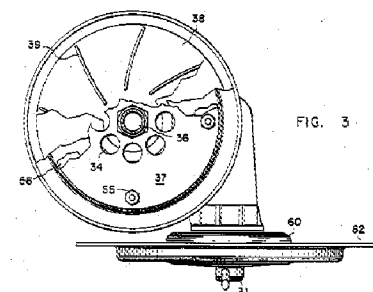
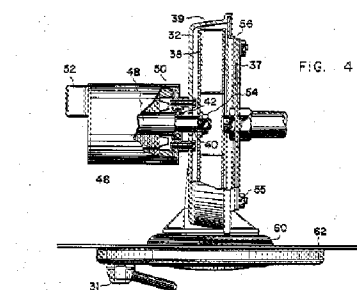


Fig. 6



US 4830600 (VerShaw et al) shows an mounting plate for a fuel supply means (36) with threaded fasteners (55) on a blower.



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THIS ACTION IS MADE FINAL

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

\USPTO CUSTOMER CONTACT INFORMATION

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carl D. Price whose telephone number is (571) 272-4880. The examiner can normally be reached on Monday through Friday between 9:00am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven B. McAllister can be reached on (571) 272-6785. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Carl D. Price/

Primary Examiner, Art Unit 3749

cp